

Reference software : what you need to know

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Managing references is a labour intensive, but necessary part of Information Management. Referencing correctly ensures that appropriate credit is given to sources and authors used to support research, avoids plagiarism and provides evidence that adequate research has been undertaken. If references are found incomplete and hence are untraceable then there is a serious problem for you, your organisation and your users. There are now a growing number of reference software packages which can help both you and your users in this process. This article outlines what reference software is, issues to consider when choosing a package to support with examples of software packages and concludes with information about a campaign to simplify the whole process!

What is reference software?

Reference software allows the systematic means of organising references. The benefits of this systematic approach include:

- Re-use of references
- Consistency in the displaying of references
- Easy to locate the publication details
- Ability to share references with others especially using a word processor to integrate citations with a piece of text.
- Generating different styles of reference lists/bibliographies as needed by a publisher or learned journal.

Effectively, the reference software allows you to

- Capture bibliographic details
- Retrieve references for reuse
- import references from a variety of sources like bibliographic databases
- search, edit, sort and share references
- select references to incorporate them in a word-processed document and format them automatically
- store links to documents or copies of them within database

How do you choose the most appropriate software package?

Choosing the most appropriate package can be a time consuming task. Often it is difficult to compare features so set aside time to obtain demonstration copies or set up accounts. Initially you need to consider the hardware you

have available and whether your organisation has an IT standard which must be conformed to (for example PC or Mac). How many users are likely to need to make use of the software? Is there a networkable version? Will users be based in one location or is access required any time, any place, anywhere? Can the data be easily transferred from one type of computer to another?

Another consideration is the integrity of the collection to be maintained? Whether entering author's names, periodical titles, keywords or other reference components, the extent to which consistency is maintained impacts upon the validity of the data retrieved, and the speed of retrieval. Check what features are provided to help maintain a consistent database, such as alphabetized listings, duplicate detection and alternative periodical names.

The software provides a facility to import references from a range of databases, suppliers and providers. You need to be clear about where you obtain your data so that you can check if the process of importing is straightforward. Some packages are aimed at particular disciplines whilst others are multidisciplinary. Direct searching of particular database hosts (Web of Science, library catalogues, etc) is often inbuilt so check if your particular favourites are listed.

The production of a bibliography at the touch of a button is the greatest time saving feature of this type of software. The delivery of several hundred output styles does away, to some extent, with the need to know citation rules and practices, but only if your required style is supported.

Although entering and retrieving references should be simple, specific training is often necessary to be able to exploit the software to its fullest. Who will provide the training? What support strategies are in place once the training phase is over? How will you obtain and encourage feedback on the software once its in place

Which reference software package should you choose?

Choosing software is a very personal activity. A useful webpage on Wikipedia compares around 30 reference software packages from free to open source to centrally hosted services with built in publishing features. Some require no more than a web browser and a log in account.

http://en.wikipedia.org/wiki/Comparison_of_reference_management_software

Reference software packages tend to either be free and/or on Opensource or are commercially available. In these straitened economic times examples of five freely available reference management software packages are listed first and then three commercially available ones further on.

Aigaion <http://www.aigaion.nl/> allows users to classify publications in a self-chosen (overlapping) topic structure. References can be categorised and there are numerous ways to browse references held (publication type, or title, etc) users can browse references under a variety of topics for ease of retrieval. Each item provides citation details and is hyperlinked to its complete bibliographic details. Clicking on an item in the topic list displays full bibliographic details. The full-text document/s can be attached to the bibliographic entries, either through uploading or by providing the URI. Aigaion supports formatted export to text, html or rtf in common citation styles.

BibME (www.bibme.org) pulls references from a variety of sources to automatically complete bibliographic entries. As you input data BibME searches for resources from sources such as CiteULike, Amazon and Yahoo News. Selecting the source they want to cite it is entered into a bibliography. The package recognises several output styles and the details can be exported to a word processing package. BibME can also deal with less traditional sources such as interviews or TV shows. A user who registers for a free account can tag bibliographies for future use. Screen shot shows a bibliography created from the BibME account.

CiteULike (<http://www.citeulike.org/>) is based more on social bookmarking. That is, software which allows you to assign keywords (or tags) to organise a collection of web based bookmarks. Unlike regular cataloguing the tags can change as the content changes. As well as saving your own references you can discover related articles by checking out other users who have saved the same references or by browsing groups formed around specific research areas. A particularly useful feature is the import process with a one click citation extraction from popular academic publishers and platforms (including PLOS, PubMed and Springer). Anyone can create a group and you might find this a useful way of actively supporting your local user group. There are other social bookmarking tools which provide very similar services and include :

<http://del.icio.us/>
www.furl.net
www.connotea.org

Mendeley (www.mendeley.com) markets itself “the itunes for research papers” allowing users to drag and drop research papers into the site as Mendeley looks up Cross-Ref DOIs, arXiv IDs and PubMed document details automatically. You can also manually add documents or import existing EndNote XML, RIS, or BibTex files. The Mendeley bibliography

can be accessed from any computer with an online account. It is probably the fastest growing social bookmarking tool around with over 4 million papers listed in it to date. Screen shot shows import file to import to Mendeley from Wikipedia with items selected which can now be tagged and annotated.

Zotero, <http://www.zotero.org/> created by staff at the George Mason University, allows you to store, organise, annotate and cite reference sources without leaving the browser. On sites such as PubMed, Google Scholar, Amazon.com and Wikipedia, Zotero detects when a reference is being viewed and saves the full reference information to a local file. Users can add notes, tags, and their own metadata through the in-browser interface. Selections of the local reference library data can later be exported as formatted bibliographies. All entries including bibliographic information and user-created rich-text memos of the selected articles can be summarized into an HTML report. There is a Firefox browser extension which allows imports into Zotero (see CiteULike above). The iTunes type interface helps to give a nicer feel to this package. The browser integration means more seamlessness between information sources and the reference management system. The libraries can be saved and organised with the tagging functionality. This package would appeal to students and young people alike.

Decisions on which package to use, as outlined above, are often based on finance, traditions and perceived use/need for the software. If finance is less of an issue then the added features of the commercial packages would be worth considering. The commercial packages tend to aimed more at the academic market but share a number of features with the free packages outlined above including search capabilities, import features (from variety of external databases and internet sites) and the ability to create bibliographies in a range of styles. Their strength, however, lies in the database integrity features such as authority lists, spell checkers and duplicate detection, which helps to keep references accurate and consistent. This is particularly useful for research groups and maybe the feature which moves you away from the free packages.

The three main reference management software packages are Endnote (www.endnote.com) now in its thirteen version and available for Macs and PCs with a desktop option as well. Reference Manager (www.refman.com) is particularly useful for dealing with database integrity (with features such as periodical abbreviations lists and find & replace options) and Refworks (www.refworks.com) is well liked because it is purely web-based and it has a number of options for getting references out of the system.

Any reference management software package, whether free or commercially available, is only ever as good as the material within it. Often with these packages users start to use them and then their interest fades over time. If the introduction of a reference software package is to be worthwhile users need to be supported in their endeavours to ensure that their “database” is accurate

and consistent. In turn this will ensure that the end product (a set of complete references) is not undermined and this labour intensive activity is subsequently reduced.

Finally, for many the existence of so many output styles for referencing is at best confusing. Alec Gill, an academic tutor and MultiMedia Developer at the University of Hull is proposing a unified academic referencing system to help simplify the complex formatting in the different bibliographic styles. He is proposing a new style which could be adopted to reduce the risk of errors in pulling a bibliography together. Further details can be found at <http://www.timeshighereducation.co.uk/story.asp?sectioncode=26&storycode=407112> and in his own Academic Reflexions blog <http://academicreflexions.blogspot.com/>

So whether you are wanting to use reference software or reform how references are cited I hope the above has given some food for thought.